

REMARKS

Claims 1, 3-15, 20, 21 and 24-26 are pending.

Claims 17 has been cancelled.

Claims 27-31 are newly added.

Section 103 Rejections:

Claim 1 has been rejected as being obvious in view of Lane and Clapp. Applicants respectfully submit that this rejection is overcome for the reasons set forth below.

Amended claim 1 now includes features which are not anticipated or suggested by the cited references, namely:

- a picture coding apparatus including picture coding means of coding pictures and providing a picture identifier for each picture as an I, P or B picture,
- priority providing means of correlating each coded picture with a priority identifier which assigns a priority level to one or more frames of the coded pictures; and
- transmission control means of transmitting . . . coded pictures with the priority identifiers
- a picture decoding apparatus including reception control means of receiving or reading the coded pictures with the priority identifiers,
- wherein each priority identifier is used by the picture decoding apparatus to determine whether each picture should be processed or not be processed according to a processing load or a processing capacity of the picture decoding apparatus, and

- each priority identifier is used independently of the picture identifiers,
- and independently of whether the picture is an I, P or B picture.

As discussed in the previous Response to the Office Action dated June 10, 2002, the invention recited in claim 1 provides that each picture has a priority identifier and a determination is made by the picture decoding apparatus whether a picture is to be processed, or not be processed, according to the load or the processing capacity of the picture decoding apparatus, and according to the level of importance assigned to a picture in the priority identifier.

As also discussed in the previous response, Claim 1 recites both, a priority identifier and a picture identifier. Amended claim 1 recites that the priority identifier is used independently of the picture identifier. Amended claim 1 further recites that the priority identifier is used independently of whether the picture is an I, P or B picture.

Basis for the priority identifier assigning a priority level to one or more frames of the coded pictures may be found in the specification, for example, at page 13, lines 8-11. As stated, the priority identifier may be for each picture or it may be for plural frames.

Accordingly, applicants' invention advantageously provides independent control at the decoding apparatus for deciding whether to process or discard a picture, independently of whether the picture is an I, P or B picture. Applicants may discard an I-picture (for example) when the decoding apparatus is overloaded.

The Office Action at page 4, lines 1-5, admits that Lane fails to disclose the limitation of "determining whether each picture should be processed or not be processed according to a processing load or a processing capacity of the picture decoding apparatus, and the priority identifier is used independently of the picture identifier and independently of whether the picture is an I, P or B picture."

Clapp cited by the Office Action teaches the concept of discarding frames to maintain sync. Clapp at column 8, lines 56-66, discloses two alternatives for

discarding frames. In the first alternative, a Δt is determined (Δt is the time between data entering the encoder buffer and the time data is leaving the decoder buffer). Depending on the value of Δt , a frame is repeated or a frame is discarded. At column 9, lines 25-33, Clapp discloses a second alternative for repeating or discarding a frame, based on an equation that predicts the value of Δt .

Clapp, however, does not disclose or suggest a picture identifier for each picture as an I, P or B picture. Clapp does not disclose or suggest a priority identifier that is transmitted with the pictures. Clapp does not disclose or suggest that each priority identifier is used by the picture decoding apparatus to determine whether each picture should be processed or not be processed according to a processing load or a processing capacity of the picture decoding apparatus. Furthermore, Clapp does not disclose or suggest each priority identifier being used independently of the picture identifiers, and independently of whether the picture is an I, P or B picture.

It is respectfully submitted that Lane is missing, at least, the features of "determining whether each picture should be processed or not be processed according to a processing load or a processing capacity of the picture decoding apparatus, and the priority identifier is used independently of the picture identifier and independently of whether the picture is an I, P or B picture," and Clapp is missing, at least, the same features. Consequently, Lane and Clapp cannot be combined to obtain applicants invention, as recited in claim 1. Reconsideration is respectfully requested.

Although not the same, claims 20, 21, 24 and 25 have also been amended to recited features similar to amended claim 1. Reconsideration of these claims, as well as their dependent claims, is respectfully requested.

Newly Added Claims 27-31

Newly added claims 27, 28 and 29 each includes the following features:

a priority identifier indicating a priority of which the picture is to be processed according to a load processed by a reception side terminal or processing capacity of the picture decoding apparatus;

the priority identifier is included in the coded various information (that is, the priority identifier is provided at the coding apparatus side and not at the decoding apparatus side); and

the priority identifier is included in the coded various information, in addition to the picture identifier.

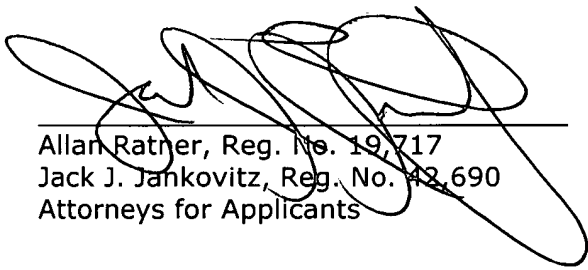
The cited references do not disclose or suggest these features and the other features recited in claims 27-29.

CONCLUSION

Claims 1, 3-15, 20, 21, and 24-26 are in condition for allowance. Newly added claims 27-31 are also in condition for allowance.

Respectfully Submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1 1. (Four Times Amended) A picture decoding and coding
2 apparatus comprising:

3 a picture coding apparatus including picture coding means of
4 coding ~~picture information~~pictures and providing a picture identifier for each
5 picture as an I, P or B picture,

6 priority providing means of correlating each coded picture
7 ~~information with a priority identifier~~ which assigns a priority level to one or more
8 frames of the coded pictures, and

9 transmission control means of transmitting or recording the coded
10 ~~picture information~~pictures with the priority ~~identifier~~identifiers; and

11 a picture decoding apparatus including reception control means of
12 receiving or reading the coded ~~picture information~~pictures with the priority
13 identifiers,

14 picture decoding means of decoding the coded ~~picture information~~
15 pictures with the priority identifieridentifiers,

16 wherein ~~said each~~ priority identifier is used by the picture decoding
17 apparatus to determine whether each picture should be processed or not be
18 processed according to a processing load or a processing capacity of the picture
19 decoding apparatus, and ~~said each~~ priority identifier is used independently of the
20 ~~picture identifier~~identifiers and independently of whether the picture is an I, P or
21 B picture.

1 3. (Twice Amended) The apparatus ~~of any one of claim 1 or~~
2 ~~claim 2~~, including priority providing means for determining the priority of
3 processing when coded information is overloaded by a predetermined standard,
4 and corresponding between said coded information and said determined priority,
5 and said picture decoding apparatus and/or sound decoding apparatus includes
6 priority decision means for ~~determine~~ determining the method of processing
7 according to the priority when the received various information is overloaded.

1 11. (Twice Amended) The apparatus ~~of anyone of claim 1 or~~
2 ~~claim 2~~, wherein the sequence of pictures and sounds to be decoded, synthesized
3 or displayed, presence or absence, or reproducing method is determined,
4 according to at least one information or more out of the accounting information,
5 service content information, password, user code, nation code, information
6 showing rank of synthesis or display, information showing rank of decoding, user"
7 s instruction, terminal processing capacity, and reproduction time.

1 12. (Twice Amended) The apparatus ~~of anyone of claim 1 or~~
2 ~~claim 2~~, wherein said reception control means handles the information describing
3 the mutual relation of information of pictures or information of sounds, out of the
4 various information, independently as different information from the picture
5 information or sound information.

1 14. (Twice Amended) The apparatus ~~of anyone of claim 1 or~~
2 ~~claim 2~~, wherein said picture synthesizing means or sound synthesizing means
3 holds, controls and utilizes the result of decoding until it is instructed to discard
4 the result of decoding from the transmission side.

1 15. (Twice Amended) The apparatus ~~of anyone of claim 1 or~~
2 ~~claim 2~~, wherein the user is informed of the presence of pictures or sounds that
3 cannot be synthesized because necessary decoded pictures or sounds are not
4 prepared, when synthesizing the pictures or sounds, on the basis of the
5 information describing the mutual relation of information of pictures or
6 information of sounds.

1 20. (Thrice Amended) A picture coding apparatus comprising:

2 picture coding means of coding ~~picture information~~ pictures and
3 providing a picture identifier for each picture as an I, P or B picture,

4 priority providing means of correlating each coded picture
5 ~~information with a priority identifier~~ which assigns a priority level to one or more
6 frames of the coded pictures, and

7 transmission control means of transmitting or recording the coded
8 ~~picture information~~ pictures with the priority identifiers to a picture decoding
9 apparatus,

10 wherein ~~said~~ each priority identifier is used by the picture decoding
11 apparatus to determine whether each picture should be processed or not be
12 processed according to a processing load or a processing capacity of the picture
13 decoding apparatus, and ~~said~~ each priority identifier is used independently of the
14 picture identifiers and independently of whether the picture is an I, P or B picture.

1 21. (Thrice Amended) A picture decoding apparatus
2 comprising:

3 reception control means of receiving or reading coded pictures
4 ~~information with a~~ correlated priority identifiers transmitted from a picture coding
5 apparatus, and ~~a~~ picture identifiers for each picture as an I, P or B picture, each
6 of the priority identifiers assigning a priority level to one or more frames of the
7 coded pictures,

8 picture decoding means of decoding the coded pictures ~~information~~
9 with the priority identifiers,

10 wherein ~~said~~ each priority identifier is used by the picture decoding
11 apparatus to determine whether each picture should be processed or not be
12 processed according to a processing load or a processing capacity of the picture
13 decoding apparatus, and ~~said~~ each priority identifier is used independently of the
14 picture identifiers and independently of whether the picture is an I, P or B picture.

1 24. (Amended) A picture decoding apparatus comprising:

2 a receiver for receiving (a) coded pictures transmitted from a
3 picture coding apparatus, and (b) a priority level associated with each coded
4 picture, wherein the priority level is assigned to one or more frames of the coded
5 pictures and obtained from a listing of more than two priority levels arranged in
6 order of importance,

7 a processor for processing the coded pictures, and

8 output means of delivering the processed pictures,

9 wherein the processor processes a picture or discards a picture
10 according to a load or processing capacity of the processor, deciding to process or
11 discard the picture based on its level of importance from the more than two

12 priority levels.

1 25. (Amended) A method of processing pictures from a coding
2 apparatus to a decoding apparatus comprising the steps of:

3 (a) receiving from the coding apparatus (i) coded I, P and B
4 pictures and (ii) a picture identifier for identifying each picture as an I, P or B
5 picture;

6 (b) receiving from the coding apparatus a priority identifier
7 associated with each coded I, P or B picture, the priority identifier assigning a
8 priority level to one or more frames of the coded pictures and derived from a
9 listing of priority levels arranged in order of importance;

10 (c) determining at the decoding apparatus a processing load or
11 a processing capacity of the decoding apparatus;

12 (d) processing or discarding a received coded picture according
13 to the determined processing load or processing capacity of the decoding
14 apparatus in step (c) and the received priority identifier,

15 wherein the received coded picture is processed or discarded based
16 on its level of importance derived from the listing arranged in order of
17 importance, and independently of the picture identifier, and independently of
18 whether the picture is an I, P or B picture.

Claims 27-31 have been added.